



Obesity Prevention
P R O G R A M

Research Projects

Epidemiologic Research on Developmental Origins of Health and Disease

Project Viva. Project Viva is a prospective cohort study of pregnant women and their children to study how factors that occur during pregnancy or around the time of delivery affect outcomes of pregnancy, common childhood conditions, and precursors to adult health outcomes. Between 1999 and 2002, Project Viva staff enrolled over 2000 pregnant women who received prenatal care at Harvard Vanguard Medical Associates, and they continue to follow the mothers and children, the oldest of whom is now 8 years old. Project Viva data sources include interviews and questionnaires, participant examinations, electronic medical records, and biosamples. Project Viva investigators have published widely on causes of gestational diabetes, pre-eclampsia, preterm birth and fetal growth, postpartum depression and weight retention, and a variety of childhood outcomes including obesity, cardiovascular risk factors, cognitive development, and asthma/atopy. The results of Project Viva have influenced the design of the National Children's Study, led to interventions by DACP and other investigators, and contributed to national health policy. Major funding is from the NIH with additional funding from CDC, the March of Dimes Foundation, and other sponsors. Matthew Gillman is PI of Project Viva and Emily Oken is Co-PI. Over two dozen DACP-based faculty, fellows, students, and staff work on Project Viva, which also includes local, national, and international collaborators.

Breastfeeding Promotion RCT and the Metabolic Syndrome in Childhood. Matthew Gillman and Emily Oken collaborate with researchers from Canada and UK to investigate the effect of breastfeeding promotion on markers of the metabolic syndrome at the age of 10 years. The study involves follow-up of approximately 14,000 children in the Republic of Belarus who, along with their mothers, participated in the largest randomized trial of breastfeeding promotion ever done (PROBIT). Funding is from NIH (Gillman PI, Oken Co-I), the Canadian Institutes of Health Research, and the European Union.

Early Determinants of Adult Health. This is an NIH-funded study of ~2000 now 40-year-old offspring of the original Collaborative Prenatal Project participants, to study prenatal and perinatal factors related to adult obesity and cardiovascular disease as well as breast cancer and neuropsychiatric outcomes. EDAH represents a collaboration of DACP investigators (Gillman) with those at Brigham and Women's Hospital, Brown and Columbia Universities, and Kaiser Permanente in Oakland.

Growing Up Today Study. The GUTS is an NIH-funded cohort study of ~17,000 offspring of participants in the Nurses' Health Study II who were 9-14 years at study entry in 1996 and have now been followed for over 10 years. The main operations of the GUTS reside at Brigham and Women's Hospital, Channing Laboratory. DACP faculty Matthew Gillman, Jess Haines, Ken Kleinman, Elsie Taveras, and Emily Oken, research associate Sheryl Rifas-Shiman, and trainees have led a variety of analyses on determinants of diet, activity, and obesity.

National Children's Study Coordinating Center. Matthew Gillman is Co-PI of the NCS Coordinating Center, located at Westat in Rockville, MD. He is a member of the NCS Steering Committee, and has been involved with the study's design since 2001.

HMO Surveillance System. Originally a CDC-funded study to examine trends in obesity prevalence among over 100,000 young children using the electronic medical records of Harvard Vanguard Medical Associates, Elsie Taveras and other DACP faculty are now extracting longitudinal data from this system to investigate predictors of obesity in early childhood.

Intervention/Health Services Research

High Five for Kids. This is an NIH-funded cluster-randomized trial of an innovative practice change intervention to prevent obesity among 2- through 6- year-old children who receive care at Harvard Vanguard Medical Associates. The 2-year intervention involves incorporating the Chronic Care Model into primary care, along with state-of-the-art behavior change techniques. Matthew Gillman is PI and Elsie Taveras is Co-PI. DACP faculty Jonathan Finkelstein, Lisa Prosser, and Ken Kleinman participate along with collaborators from Harvard School of Public Health and Dana-Farber Cancer Institute.

Healthy Directions-2. A follow-on to the successful Healthy Directions intervention, this NIH-funded randomized controlled trial aims to reduce chronic disease risk in healthy adults. Among patients at Harvard Vanguard Medical Associates, the 2-year intervention includes a choice of communication strategies, including interactive website, interactive voice response, email, and mail to effect behavior change in diet, physical activity, and smoking. DACP faculty Jess Haines and Matthew Gillman collaborate with investigators from Dana-Farber Cancer Institute.

Step Up, Trim Down. This is a pilot randomized controlled trial of an interactive web-based intervention to induce weight loss in obese hypertensive adults who obtain care at Harvard Vanguard Medical Associates. Lasting 12 weeks, the intervention consists of a website with individually tailored monitoring, coaching, and information components, augmented by outreach phone calls. Matthew Gillman, PI, and research fellow Sharon Herring collaborate with investigators from Dana-Farber Cancer Institute.

Other Pilot Interventions. DACP faculty Jonathan Finkelstein, Jess Haines, Emily Oken, Elsie Taveras, and research fellow Sara Benjamin all have HPHC Foundation funds to

conduct formative behavior change interventions (or evaluations of policy interventions) in pregnant women and young children, and in clinical and community settings, to prevent obesity and its consequences. In addition, DACP faculty Lisa Prosser is investigating the costs and utilities parents place on their families' changing from less to more healthful weight-related behaviors.

Cost-effectiveness of Blood Pressure Screening in Children. Combining published epidemiologic and intervention research in children and young adults with the Coronary Heart Disease Policy Model developed by Weinstein and Goldman, the investigators aim to estimate the cost-effectiveness of childhood blood pressure screening in the United States. Funded by the HPHC Foundation, Matthew Gillman collaborates with investigators at Columbia University as well as Brigham and Women's Hospital, University of Toronto, University of California San Francisco.

HMO Research Network Activities. Members of the HMORN's obesity interest group, including DACP faculty, are planning a number of multi-site studies that span the three research foci of DACP's Obesity Prevention Program—developmental origins epidemiology, behavior change intervention, and health services research.

Clinical Activities

While clinical work is not explicitly part of the Program, clinician-faculty practices complement their research. At Children's Hospital, Dr. Gillman sees patients in the Preventive Cardiology Clinic and Dr. Taveras in the One Step Ahead program; at Brigham and Women's Hospital, Dr. Oken provides primary care in adult women's health with a focus on obstetric medicine; and at Harvard Vanguard Medical Associates, Dr. Finkelstein provides pediatric primary care.